

## CLAIMS

What is claimed is:

1           1.     A transmitter-receiver system comprising:  
2           a rolling code receiver that generates a sequence of unique codes based on  
3     a rolling code algorithm; and  
4           a fixed code transmitter including a memory that contains a set of fixed  
5     codes, said fixed code transmitter operable to transmit one or more codes of the  
6     set of fixed codes to operate the rolling code receiver.

1           2.     The system of claim 1, wherein the set of fixed codes having fewer  
2     codes than a total number of unique codes that is generated by the rolling code  
3     receiver.

1           3.     The system of claim 1, wherein the memory of the fixed code  
2     transmitter contains a second set of fixed codes, said fixed code transmitter  
3     operate to transmit one or more codes of the second set of fixed codes to operate  
4     a second rolling code receiver.

1           4.     The system of claim 1, wherein the rolling code receiver, upon  
2     reception of a received code, to generate a current code and to actuate a device if  
3     the received code is within a code window between the current code and the  
4     current code plus a predetermined number of codes.

1           5.     The system of claim 1, wherein said rolling code receiver includes a  
2 code window, and said fixed code transmitter, upon activation, to transmit first  
3 and second codes to said rolling code receiver, said first code being within a  
4 predetermined number of codes of said second code along a code sequence, said  
5 rolling code receiver to be activated in response to receiving the first and second  
6 codes.

1           6.     A fixed code transmitter comprising:  
2 a signal transmission circuit;  
3 a memory that includes a set of fixed codes for operating a rolling code  
4 receiver;  
5 a processor coupled to the signal transmission circuit and memory, said  
6 processor, in response to actuation of an input, to retrieve one or more codes of  
7 the set of fixed codes from the memory and transmit the one or more fixed codes,  
8 using the signal transmission circuit, to activate the rolling code receiver.

1           7.     The fixed code transmitter of claim 6, wherein the set of fixed codes  
2 having fewer codes than a total number of unique codes that can be generated by  
3 the rolling code receiver.

1           8.     The fixed code transmitter of claim 6, wherein said memory further  
2 includes a second set of fixed codes for controlling a second rolling code receiver,  
3 said processor to (i) detect a selection request corresponding to one of the rolling  
4 code receivers, (ii) retrieve one or more codes of one of the first set and second

5 set of fixed codes corresponding to a selected rolling code receiver, and (iii)  
6 transmit said retrieved one or more codes to actuate the selected rolling code  
7 receiver.

1 9. The fixed code transmitter of claim 6, wherein said retrieved one or  
2 more of fixed codes includes a code pair, having a first code and a second code,  
3 said second code to be within a predetermined number of codes from said first  
4 code, said processor to transmit the code pair to operate the rolling code receiver.

1 10. The fixed code transmitter of claim 9, wherein said predetermined  
2 number is between 2 and 100.

1 11. A method of operating a rolling code receiver using a fixed code  
2 transmitter comprising:  
3 capturing a plurality of codes from a rolling code transmitter  
4 corresponding to the rolling code receiver;  
5 identifying a set of fixed codes that will operate the rolling code receiver;  
6 storing said set of fixed codes in a memory of said fixed code transmitter;  
7 and  
8 activating said rolling code receiver by transmitting, from said fixed code  
9 transmitter, one or more codes of said set of fixed codes.

1           12.    The method of claim 11 wherein said set of fixed codes has fewer  
2 codes than a total number of unique codes that is generated by the rolling code  
3 receiver.

1           13.    The method of claim 11, further comprising:  
2           capturing a second plurality of codes from an additional rolling code  
3 transmitter corresponding to an additional rolling code receiver;  
4           identifying an additional set of fixed codes that will operate the additional  
5 rolling code receiver;  
6           storing said additional set of fixed codes in the memory of said fixed code  
7 transmitter; and  
8           accessing one or more of said additional set of fixed codes based on a user  
9 selection; and  
10          transmitting, from said fixed code transmitter, one or more codes from  
11 said additional set of fixed codes to activate the additional rolling code receiver.

1           14.    The method of claim 11, wherein said activating said rolling code  
2 receiver comprises, activating said rolling code receiver by transmitting, from the  
3 fixed code transmitter, a code pair of said set of fixed codes comprised of a first  
4 code and a second code, said second code to be within a predetermined number  
5 of codes from said first code along a code sequence.

1           15.    A method of operating a rolling code receiver with a fixed code  
2 transmitter comprising:

3 transmitting, from the fixed code transmitter, one or more codes from a  
4 set of fixed codes; and  
5 operating the rolling code receiver using the one or more codes.

1 16. The method of claim 15, wherein said set of fixed codes is a subset  
2 of a rolling code sequence of the rolling code receiver.

1 17. The method of claim 15, wherein prior to said transmitting, said  
2 method comprises:  
3 capturing a plurality of codes from a rolling code transmitter  
4 corresponding to the rolling code receiver;  
5 identifying the set of fixed codes that is capable of operating said rolling  
6 code receiver;  
7 storing said set of fixed codes in a memory of said fixed code transmitter;  
8 and  
9 accessing one or more of said set of fixed codes for transmission based on  
10 a user selection.

1 18. A transmitter-receiver system comprising:  
2 a rolling code receiver coupled to a device, said rolling code receiver to  
3 generate a sequence of unique codes based on a rolling code algorithm, said  
4 rolling code receiver to actuate the device if a received code is equal to a current  
5 generated code in the sequence of unique codes; and

6 a transmitter including a memory that contains a set of codes, said  
7 transmitter, upon each actuation, to transmit one or more of the set of codes to  
8 operate the rolling code receiver to actuate the device, said set of codes having  
9 fewer codes than a total number of codes in the sequence of unique codes.

1 19. The system of claim 18 wherein said rolling code receiver to actuate  
2 the device if the received code is equal to a code within a code window defined  
3 by the current generated code and the current generated code plus a  
4 predetermined number.

1 20. A transmitter for operating a rolling code receiver, comprising:  
2 a fixed code transmitter including a memory that contains a set of fixed  
3 codes, said fixed code transmitter to transmit one or more codes of the set of  
4 fixed codes to operate the rolling code receiver.

1 21. The transmitter of claim 20 wherein the set of fixed codes has fewer  
2 codes than a total number of unique codes that is generated by the rolling code  
3 receiver.